

ABSTRACT

The invention is directed to a method of selecting an agent that prevents cleavage of an APP substrate by contacting a candidate agent with a

5 β-secretase complex that encompasses cathepsin B and cathepsin L, in the presence of an APP substrate and under conditions that allow for cleavage of the APP substrate by the β-secretase complex; and selecting the agent that prevents the cleavage of the APP substrate by the β-

10 secretase complex. The prevention of Aβ peptide formation by an individual results in a reduction amyloid plaques. Thus, the invention provides a method of reducing the severity of a condition characterized by amyloid plaque formation such as Alzheimer's Disease.